



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,124	05/31/2006	Ulrike Licht	290762US0X PCT	1757
22850	7590	11/30/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER NILAND, PATRICK DENNIS	
			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
			11/30/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/581,124	Applicant(s) LICHT ET AL.	
	Examiner Patrick D. Niland	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1796

1. The amendment of 8/28/09 has been entered. Claims 1-20 are pending.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 6 and 16-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

A. The applicant argues that the polymer molecular weights of the instant claim 6, and thereby the claims which depend therefrom, are "absolute molecular weights". The examiner does not know what an "absolute molecular weight" is. The examiner finds no definition of "absolute molecular weight" or indication that the polymer molecular weight of claim 6 is an "absolute molecular weight" in the applicant's specification. If the applicant means that the polydispersity is exactly equal to one by "absolute molecular weight", this is believed to be impossible by current technology and is not enabled by the instant specification. Again, the applicant is directed to the discussions of polymer molecular weights in basic polymer texts for background information on this concept.

The instant specification does not describe "absolute molecular weights" nor teach how to make the polymers of the instant claim 6 and its dependent claims that have "absolute

Art Unit: 1796

molecular weights” as claimed or have a polydispersity of exactly one if that is what is intended by “absolute molecular weight”.

5. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the disclosed adjustments, does not reasonably provide enablement for all of the adjustments encompassed by the instantly claimed “particle size of the starting compounds is adjusted prior to reaction”. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

A. The instant claims 1-20 recite “particle size of the starting compounds is adjusted prior to reaction” without specifying the particle sizes and adjustments. Therefore the claims encompass all possible particle sizes and adjustment methods, including those not described in the originally filed specification. The instantly claimed “particle size of the starting compounds is adjusted prior to reaction” reads on an infinite number of adjustments and all possible particle sizes, including those outside of the teachings of the originally filed specification. In re Wands has 8 criteria, (MPEP 2164.01(a)), as shown below.

- (A)The breadth of the claims;
- (B)The nature of the invention;
- (C)The state of the prior art;
- (D)The level of one of ordinary skill;
- (E)The level of predictability in the art;

Art Unit: 1796

(F)The amount of direction provided by the inventor;

(G)The existence of working examples; and

(H)The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

It is noted that the instant claims read on all potential particle sizes and adjustment methods, including those not described in the originally filed specification (Wands factor A). The specification does not describe how to make all such adjustments and particle sizes and how to select those adjustment methods from the infinite list thereof which will function as required in the instant invention (Wands factors F, G). It would require an infinite amount of experimentation to determine how to perform all of the adjustment methods encompassed by the instant claims and another infinite amount of experimentation to determine which of these adjustment methods and the particles sizes resulting therefrom would function in the instantly claimed invention as required (Wands factor H). Chemistry is an unpredictable art (Wands factor E). The ordinary skilled artisan has not imagined nor figured out how to make all of the adjustments encompassed by the instant claim of “particle size of the starting compounds is adjusted prior to reaction” yet (Wands factors C, D, E, F, G, and H). The enabling disclosure is not commensurate with the full scope of the claimed “particle size of the starting compounds is adjusted prior to reaction”.

The examiner notes the originally filed specification, page 1, lines 31-34, page 2, lines 39-40, and page 3, lines 1-5 and the remainder of the instant originally filed specification. These sections do not enable the full scope of the instantly claimed

Art Unit: 1796

“particle size of the starting compounds is adjusted prior to reaction” for the reasons stated above.

See *Sitrick v Dreamworks, LLC* (Fed Cir, 2007-1174, 2/1/2008), particularly

“Before MICHEL, Chief Judge, RADER and MOORE, Circuit Judges.
MOORE, Circuit Judge.

112(1) Enablement - The enablement requirement is satisfied when one skilled in the art, after reading the specification, could practice the claimed invention without undue experimentation

We review the grant of summary judgment *de novo*. *Liebel-Flarsheim Co. v. Medrad, Inc.*, 481 F.3d 1371, 1377 (Fed. Cir. 2007). Summary judgment is appropriate “if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(c). Whether a claim satisfies the enablement requirement of 35 U.S.C. § 112, ¶ 1 is a question of law, reviewed *de novo*, based on underlying facts, which are reviewed for clear error. *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1238-39 (Fed. Cir. 2003). The evidentiary burden to show facts supporting a conclusion of invalidity is one of clear and convincing evidence because a patent is presumed valid. *Id.* The “enablement requirement is satisfied when one skilled in the art, after reading the specification, could practice the claimed invention without undue experimentation.” *Id.* at 1244.

**112(1) Enablement - The full scope of the claimed invention must be enabled.
A patentee who chooses broad claim language must make sure the broad claims are fully enabled.**

The full scope of the claimed invention must be enabled. See *Auto. Techs. Int’l, Inc. v. BMW of N. Am., Inc.*, 501 F.3d 1274, 1285 (Fed. Cir. 2007). The rationale for this statutory requirement is straightforward. Enabling the full scope of each claim is “part of the *quid pro quo* of the patent bargain.” *AK Steel*, 344 F.3d at 1244. A patentee who chooses broad claim language must make sure the broad claims are fully enabled. “The scope of the claims must be less than or equal to the scope of the enablement” to “ensure[] that the public knowledge is enriched by the patent specification to a degree at least commensurate with the scope of the claims.” *Nat’l Recovery Techs., Inc. v. Magnetic Separation Sys., Inc.*, 166 F.3d 1190, 1195-96 (Fed. Cir. 1999).”

Art Unit: 1796

6. Claims 1-9, 11-18, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. It is unclear what is intended by “miniemulsion” of the instant claims 1-9, 11-18, and 20 . The preferred and claimed particle sizes are noted, e.g. page 2, line 40 and the instant claim 19 of the instant specification. However, these sizes are “preferred” and not limiting, except in the claims that recite them. It is unclear what the full scope of “miniemulsion” is intended to be.

The argued Wikipedia definition of miniemulsion is noted. However, the instant specification does not reference the Wikipedia definition as the definition of the instantly claimed miniemulsion polymerization. The examiner notes particularly that the particle size of the Wikipedia article is stated as being “typically a size between 50 and 500 nm. “Typically” is not limiting. Wikipedia is not subject to the above cited statute. Therefore, Wikipedia need not “particularly point out and distinctly claim the subject matter which applicant regards as the invention.” The instant claims are subject thereto and must particularly point out and distinctly claim the subject matter which applicant regards as the invention. The lack of clarity of scope of the resulting particle sizes due to the lack of specification of the boundaries of “miniemulsion”, particularly regarding particle size. It remains unclear what the metes and bounds of “miniemulsion” of the instant claims is required to be. It is particularly unclear how much particle size differentiation from the preferred particle sizes of the instant specification is intended to fall within the scope of the instant claims. The scope of the instant claims is therefore unclear. Wikipedia does not remedy this, even ignoring the shortcomings of using Wikipedia as a technical reference. The instant claims are not limited to the parameters,

Art Unit: 1796

particularly the particle sizes of the Wikipedia article and the applicant may be their own lexicographer and redefine terms, particularly those which do not have a particularly well defined scope, such as "miniemulsion".

B. The instant claim 6 refers to polymeric molecular weights simply as "molecular weight". It is unclear what is intended by these polymeric molecular weights, e.g. number average, weight average, viscosity average, z average, etc.. These basis polymeric molecular weight concepts are explained in basic polymer texts.

The applicant argues that the polymer molecular weights of the instant claim 6, and thereby the claims which depend therefrom, are "absolute molecular weights". The examiner does not know what an "absolute molecular weight" is. The examiner finds no definition of "absolute molecular weight" or indication that the polymer molecular weight of claim 6 is an "absolute molecular weight" in the applicant's specification. If the applicant means that the polydispersity is exactly equal to one by "absolute molecular weight", this is believed to be impossible by current technology and is not enabled by the instant specification. Again, the applicant is directed to the discussions of polymer molecular weights in basic polymer texts for background information on this concept.

It remains unclear what is intended by the polymer molecular weights of the instant claims 6 and the claims which depend therefrom.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1796

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-7 and 12 -18 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. No. 5612406 Frings et al. with US Pat. No. 4147679 Scriven et al. being cited as evidence.

Frings discloses an aqueous dispersion of polyurethane/acrylic block copolymer made by the instantly claimed process using the instantly claimed functional initiators, where the higher hydrophile content and solubility described by the reference implies the instantly claimed “mini-emulsion”/particle sizes for the more hydrophilic/more soluble blocks necessarily because the more hydrophilic/more soluble blocks are known/expected to possess smaller particle sizes within the scope of the instantly claimed “mini-emulsion”/particle sizes. See the abstract; column 1, lines 14-67; column 2, lines 1-67, particularly 30-40, noting lines 33-35, and lines 45-67; column 3, lines 1-67, particularly 31-34, which falls within the scope of the instant claim 4 amounts, 55-67; column 4, lines 1-67, particularly 27-67; column 5, lines 1-67, particularly 50-67; column 6, lines 1-67, particularly lines 33-41, noting “water-soluble”, column 7, lines 1-67, particularly 41-46; column 8, lines 1-67, particularly 10-17; claims 1-2; and the remainder of the document. The molecular weights of the disclosed diisocyanates and those of column 3, lines 1-13 encompass the molecular weights of the instant claim 6 for some type of average molecular weight. The hydroxyl acrylates are the instantly claimed

Art Unit: 1796

component e, which coupled with the disclosed acrylic acids are the instantly claimed component d.

The applicant's argument "As Applicants' attorney pointed out during the above-referenced interview, Frings et al is from the same patent family as EP 0522675, which is described in the specification herein at paragraph [0014] as disclosing the use of azo initiators attached to polyurethanes for preparing block copolymers. Frings et al discloses a process for the production of block copolymers, whereby azo macroinitiators are reacted with radical-polymerizable monomers. Frings et al also discloses a process for the production of the azo macroinitiators. Even if it were assumed that the reaction product of the radical-polymerizable monomers, and the azo macroinitiator, of Frings et al correspond to polymer II and polymer I, respectively, of present Claim 1, and while Frings et al discloses that the polymerization of the radical- polymerizable monomers (preparation of polymer II) might be carried out in emulsion or dispersion, there is no explicit or implicit disclosure or suggestion of preparing the azo macroinitiator (polymer I) in emulsion, let alone in miniemulsion, as Applicants' attorney also pointed out during the interview." is noted. The examiner notes column 4, lines 34-41 and column 7, lines 18-25, of which the mixture of emulsifiers of the emulsifier mixtures meets the instantly claimed "hydrophobic costabilizer" given the necessary hydrophobic content of an emulsifier of the prior art systems as does the organic solvent of lines 37-38. The instant claims 1-7 and 12 -18 are directed to the aqueous dispersions per se, not the methods of making them. It is not seen that the method of making the instantly claimed polymer I distinguishes the instantly claimed aqueous dispersions from those of the cited prior art,

Art Unit: 1796

which contain the instantly claimed ingredients, even if the prior art polymer I is made by a different process, particularly considering the breadth of the instant claims. See MPEP 2112-2113.

Even if the instantly claimed process is interpreted as requiring the final product to have particle sizes within 50-500 nm, which the examiner does not concede, column 6, lines 33-41, particularly "water soluble" is understood as requiring very small particle sizes which are submicron. Polymer molecules fold up into balls in solution. These balls have particle sizes dependent on the length, e.g. molecular weight, of the polymer molecules. The examiner notes that a commonly stated distinction between solution and dispersion is that solutions are clear and dispersions are cloudy. Scriven, column 18, lines 3-21, particularly 15-21 is particularly noted. The skilled artisan in the polymer dispersion art understands that clear "dispersions" exist. The foundation is that explained by the examiner above. Einstein's well known (in undergraduate chemistry books, particularly Physical Chemistry texts) and famous equation of viscosity is noted, particularly for the molecular folding described above, if the examiner's explanation is not considered authoritative enough on this issue. These optically clear dispersions are understood to be optically clear due to their small particle size, which is not able to distort light to give the Tyndall effect of the larger particle sizes. The examiner considers the range of particle sizes implicitly denoted by the patentee at column 6, lines 33-41 to encompass those required of miniemulsions, particularly in going from the dispersions to the solutions of the patentee, even though the instant specification does not strictly define

any particular particle size required by the instantly claimed miniemulsion as noted in the above 112 rejection.

The applicant's argument "In addition, as Applicants' attorney explained during the interview, a miniemulsion does not form automatically, but must be subjected to some amount of shearing, as described in the specification herein, for example, at paragraph [0024], and in the definition of "miniemulsion" from Wikipedia, submitted herewith, and other articles in the literature, such as "What are miniemulsions" submitted herewith from an article by K. Landfester, at www.mpikg-olm.mpg.de/kc/landfester. Frings et al, on the other hand, discloses only stirring in the preparation of their block copolymers. See, for example, the descriptions in each of Examples 8-13, which discloses either stirring or "vigorous" stirring (with no definition of "vigorous" defined.)

During the interview, the Examiner suggested that a miniemulsion (or at least a composition having the structure of a miniemulsion) could inherently result using, in effect, a relatively high content of hydrophilic monomers. The Examiner based this finding on the disclosure in US 4,147,679 (Scriven et al) at column 18, line 3ft. However, notwithstanding the validity of the Examiner's suggestion that miniemulsions, or compositions analogous to miniemulsions with regard to droplet particle size, are obtainable without any shearing or other physical means if components are hydrophilic enough, there is no reason to believe that the aqueous dispersions and emulsions of Frings et al would have such a droplet size." are not persuasive for the reasons stated above, particularly those regarding Scriven, as cited above, and Frings, column 7, lines 33-41.

Art Unit: 1796

The applicant's arguments have been fully considered but are not persuasive in view of the above reasons and the full teachings of the cited prior art. This rejection is therefore maintained.

10. Claims 1-7 and 12 -18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 5612406 Frings et al..

Frings discloses an aqueous dispersion of polyurethane/acrylic block copolymer made by the instantly claimed processes using the instantly claimed functional initiators, where the higher hydrophile content and solubility described by the reference implies the instantly claimed "mini-emulsion"/particle sizes for the more hydrophilic/more soluble blocks necessarily because the more hydrophilic/more soluble blocks are known/expected to possess smaller particle sizes within the scope of the instantly claimed "mini-emulsion"/particle sizes. See the abstract; column 1, lines 14-67; column 2, lines 1-67, particularly 30-40, noting lines 33-35, and lines 45-67; column 3, lines 1-67, particularly 31-34, which falls within the scope of the instant claim 4 amounts, 55-67; column 4, lines 1-67, particularly 27-67; column 5, lines 1-67, particularly 50-67; column 6, lines 1-67, particularly lines 33-41, noting "water-soluble", column 7, lines 1-67, particularly 41-46; column 8, lines 1-67, particularly 10-17; claims 1-2; and the remainder of the document. The molecular weights of the disclosed diisocyanates and those of column 3, lines 1-13 encompass the molecular weights of the instant claim 6 for some type of average molecular weight. The hydroxyl acrylates are the instantly claimed component e, which coupled with the disclosed acrylic acids are the instantly claimed component d.

It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the instantly claimed combinations of ingredients and amounts thereof in the emulsions and processes of Frings because they are encompassed by Frings and would have been expected to give the emulsions and properties thereof of the emulsions of Frings.

The applicant's argument "As Applicants' attorney pointed out during the above-referenced interview, Frings et al is from the same patent family as EP 0522675, which is described in the specification herein at paragraph [0014] as disclosing the use of azo initiators attached to polyurethanes for preparing block copolymers. Frings et al discloses a process for the production of block copolymers, whereby azo macroinitiators are reacted with radical-polymerizable monomers. Frings et al also discloses a process for the production of the azo macroinitiators. Even if it were assumed that the reaction product of the radical-polymerizable monomers, and the azo macroinitiator, of Frings et al correspond to polymer II and polymer I, respectively, of present Claim 1, and while Frings et al discloses that the polymerization of the radical- polymerizable monomers (preparation of polymer II) might be carried out in emulsion or dispersion, there is no explicit or implicit disclosure or suggestion of preparing the azo macroinitiator (polymer I) in emulsion, let alone in miniemulsion, as Applicants' attorney also pointed out during the interview." is noted. The examiner notes column 4, lines 34-41 and column 7, lines 18-25, of which the mixture of emulsifiers of the emulsifier mixtures meets the instantly claimed "hydrophobic costabilizer" given the necessary hydrophobic content of an emulsifier of the prior art systems as does the organic solvent of lines 37-38. The instant

Art Unit: 1796

claims 1-7 and 12 -18 are directed to the aqueous dispersions per se, not the methods of making them. It is not seen that the method of making the instantly claimed polymer I distinguishes the instantly claimed aqueous dispersions from those of the cited prior art, which contain the instantly claimed ingredients, even if the prior art polymer I is made by a different process, particularly considering the breadth of the instant claims. See MPEP 2112-2113.

Even if the instantly claimed process is interpreted as requiring the final product to have particle sizes within 50-500 nm, which the examiner does not concede, column 6, lines 33-41, particularly "water soluble" is understood as requiring very small particle sizes which are submicron. Polymer molecules fold up into balls in solution. These balls have particle sizes dependent on the length, e.g. molecular weight, of the polymer molecules. The examiner notes that a commonly stated distinction between solution and dispersion is that solutions are clear and dispersions are cloudy. Scriven, column 18, lines 3-21, particularly 15-21 is particularly noted. The skilled artisan in the polymer dispersion art understands that clear "dispersions" exist. The foundation is that explained by the examiner above. Einstein's well known (in undergraduate chemistry books, particularly Physical Chemistry texts) and famous equation of viscosity is noted, particularly for the molecular folding described above, if the examiner's explanation is not considered authoritative enough on this issue. These optically clear dispersions are understood to be optically clear due to their small particle size, which is not able to distort light to give the Tyndall effect of the larger particle sizes. The examiner considers the range of particle sizes implicitly denoted by the patentee at column 6, lines 33-41 to

Art Unit: 1796

encompass those required of miniemulsions, particularly in going from the dispersions to the solutions of the patentee, even though the instant specification does not strictly define any particular particle size required by the instantly claimed miniemulsion as noted in the above 112 rejection.

The applicant's argument "In addition, as Applicants' attorney explained during the interview, a miniemulsion does not form automatically, but must be subjected to some amount of shearing, as described in the specification herein, for example, at paragraph [0024], and in the definition of "miniemulsion" from Wikipedia, submitted herewith, and other articles in the literature, such as "What are miniemulsions" submitted herewith from an article by K. Landfester, at www.mpikg-olm.mpg.de/kc/landfester. Frings et al, on the other hand, discloses only stirring in the preparation of their block copolymers. See, for example, the descriptions in each of Examples 8-13, which discloses either stirring or "vigorous" stirring (with no definition of "vigorous" defined.)

During the interview, the Examiner suggested that a miniemulsion (or at least a composition having the structure of a miniemulsion) could inherently result using, in effect, a relatively high content of hydrophilic monomers. The Examiner based this finding on the disclosure in US 4,147,679 (Scriven et al) at column 18, line 3ft. However, notwithstanding the validity of the Examiner's suggestion that miniemulsions, or compositions analogous to miniemulsions with regard to droplet particle size, are obtainable without any shearing or other physical means if components are hydrophilic enough, there is no reason to believe that the aqueous dispersions and emulsions of Frings et al would have such a droplet size." are not persuasive for the reasons stated above, particularly those regarding Scriven, as cited above, and Frings, column 7, lines 33-

Art Unit: 1796

41.

The applicant's arguments have been fully considered but are not persuasive in view of the above reasons and the full teachings of the cited prior art. This rejection is therefore maintained.

11. Claims 8-11 and 19-20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1st and/or 2nd paragraphs, as applicable, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The applicant's argument that the polymer falling within the scope of the instantly claimed polymer I is not made by miniemulsion polymerization in Fring is persuasive regarding the instant method claims.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Friday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/581,124

Page 17

Art Unit: 1796

/Patrick D Niland/
Primary Examiner
Art Unit 1796